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ATTORNEY DOCKET NO. 01173.0015U3 (formerly 25006.0006U3)

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of)

Paul M. Lizardi)

Serial No.: 09/855,170)

Filed: May 14, 2001)

For: "ARTIFICIAL LONG TERMINAL
REPEAT VECTORS")

Group Art Unit: Unassigned

Examiner: Unassigned

INFORMATION DISCLOSURE STATEMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

NEEDLE & ROSENBERG, P.C.
Suite 1200, The Candler Building
127 Peachtree Street, N.E.
Atlanta, Georgia 30303-1811

September 27, 2001

Sir:

Submitted herewith is a copy of a form PTO-1449 filed in the parent application (U.S. Serial No. 09/396,340) with the parent application's docket number, serial number, filing date and group art number (if assigned) struck through and those of the present application written in. Each of the references listed on the copy of the form PTO-1449 was submitted to the Examiner and is of record in the parent application. Thus, copies are not provided.

Also submitted herewith on a new form PTO 1449 is a new reference not previously cited but known to applicants and/or their attorneys pursuant to the requirements of 37 C.F.R. § 1.56. A copy of this document is enclosed.

Consideration of the cited documents and making the same of record in the prosecution of the above-noted application are respectfully requested.



ATTORNEY DOCKET NO. 01173.0015U3 (formerly 25006.0006U3)
SERIAL NO.: 09/855,170

It is believed that this paper is being timely filed and that no fee is required for the filing thereof. However, the Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 14-0629.

Respectfully submitted,

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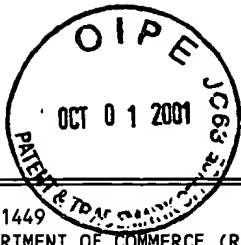
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Form PTO-1449 U.S. DEPARTMENT OF COMMERCE (Rev. 7-80) PATENT AND TRADEMARK OFFICE LIST OF PRIOR ART CITED BY APPLICANT (Use several sheets if necessary)				ATTORNEY DOCKET NO.: 01173.0015U3		SERIAL NO. 09/855,170	
				APPLICANT: Paul M. Lizardi			
				FILING DATE: May 14, 2001		GROUP: Unassigned	
U.S. PATENT DOCUMENTS							
EXAMINER INITIAL	A1	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
		6,087,133	07/11/00	Dattagupta <i>et al.</i>			
FOREIGN PATENT DOCUMENTS							
OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)							
EXAMINER:		DATE CONSIDERED:					
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<p>Substitute for form 1449A/PTO</p> <p>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</p> <p>(use as many sheets as necessary)</p>		<p>Complete if Known</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Application Number</td> <td style="width: 50%;">109/396,340- 09/855,170</td> </tr> <tr> <td>Filing Date</td> <td>September 15, 1999 May 14, 2001</td> </tr> <tr> <td>First Named Inventor</td> <td>Paul M. Lizardi</td> </tr> <tr> <td>Group Art Unit</td> <td>4643-</td> </tr> <tr> <td>Examiner Name</td> <td></td> </tr> <tr> <td>Attorney Docket Number</td> <td>YU-125 25006-000643</td> </tr> </table>		Application Number	109/396,340- 09/855,170	Filing Date	September 15, 1999 May 14, 2001	First Named Inventor	Paul M. Lizardi	Group Art Unit	4643-	Examiner Name		Attorney Docket Number	YU-125 25006-000643
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Attorney Docket Number	YU-125 25006-000643														
Sheet	1	of	16												

U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	US Patent Document		Name of Patentee or Applicant of Cited Document	Date of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
		4,748,111		Dattagupat, et al.	05-31-1988	
		4,883,750		Whiteley, et al.	12-28-1989	
		4,965,188		Mullis, et al.	10-23-1990	
		4,994,373		Stavrianopoulos, et al.	02-19-1991	
		5,001,050		Blanco, et al.	03-19-1991	
		5,043,272		Hartley	08-27-1991	
		5,130,238		Malek, et al.	07-14-1992	
		5,198,543		Blanco, et al.	03-30-1993	
		5,242,794		Norman, et al.	09-07-1993	
		5,273,638		Konrad, et al.	12-28-1993	
		5,328,824		Ward, et al.	07-12-1994	
		5,354,668		Auerbach	10-11-1994	
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		5,455,166		Walker	10-03-1995	
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		5,614,389		Auerbach	03-25-1997	
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		5,629,179		Mierendorf, et al.	05-13-1997	
		5,714,320		Kool	02-03-1998	
		5,733,733		Auerbach	03-31-1998	
		5,854,033		Lizardi	12-29-1998	

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				Application Number	09/396,340 09/855,170
				Filing Date	September 15, 1999 May 14, 2001
				First Named Inventor	Paul M. Lizardi
				Group Art Unit	1643
				Examiner Name	
Sheet 2 of 16	Attorney Docket Number YU 125-25006-P001.u3				

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Office. ²	Number ²	Kind Code ³ (if known)				
		JP	4-262799	A		09-18-1992		
		JP	4-304900	A		10-28-1992		
		AU	84173/91 B		Syngene, Inc.	02-18-1992		
		EP	0128 332	A1	Enzo Biochem, Inc.	12-19-1984		
		EP	0356 021	A2	Imperial Chemical Ind. PLC	07-27-1989		
		EP	0439 182	B1	Abbott Laboratories	04-24-1996		
		EP	0466 520	A1	Life Technologies, Inc.	01-15-1992		
		EP	0505 012	A2	F. Hoffmann-La Roche AG	09-23-1992		
		EP	0667 393	A2	Enzo Diagnostics, Inc.	08-16-1995		
		EP	0678 582	A1	Becton Dickinson and Co.	10-25-1995		
		WO	91/08307	A1	Microprobe Corporation	06-13-1991		
		WO	92/01813	A1	Syngene, Inc.	02-06-1992		
		WO	94/24312	A2	Beckman Instruments, Inc.	10-27-1994		
		WO	95/03430	A1	Gen-Probe Incorporated	02-02-1995		
		WO	95/03432	A1	Bio-Rad Laboratories, Inc.	02-02-1995		
		WO	95/22623	A1	Landegren	08-24-1995		
		WO	95/25180	A1	Gen-Probe Inc.	09-21-1995		
		WO	95/35390	A1	Mount Sinai School of Medicine of the City University of New York	12-28-1995		
		WO	96/33207	A1	Glaxo Group Limited	10-24-1996		
		WO	97/19193	A2	Yale University	05-29-1997		
		WO	97/42346	A1	Tepnel Medical Ltd.	11-13-1997		

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		Filing Date	September 15, 1999 May 14, 2000
		First Named Inventor	Paul M. Lizardi
		Group Art Unit	1643
		Examiner Name	
Sheet 3 of 16	Attorney Docket Number	YU 125-25006.000643	

OTHER ART - NON PATENT LITERATURE DOCUMENTS			
Examiner's Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T ²
		ABRAVAYA, et al., "Detection of point mutations with a modified ligase chain reaction (Gap-LCR)," <i>Nucleic Acids Res.</i> 23(4):675-682 (1995).	
		ALIOTTA, et al., "Thermostable Bst DNA polymerase I lacks a 3'→5' proofreading exonuclease activity," <i>Genet Anal.</i> 12(5-6):185-95 (1996).	
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		BLANCO, et al., "Terminal protein-primed DNA amplification," <i>Proc. Natl. Acad. Sci.</i> 91:12198-202 (1994).	

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		Application Number	09/396,348 ¹ 09/855,170
		Filing Date	September 16, 1999 May 14, 2001
		First Named Inventor	Paul M. Lizardi
		Group Art Unit	1643
		Examiner Name	
Sheet 4 of 16	Attorney Docket Number	YU 125 25006.000643	

OTHER ART – NON PATENT LITERATURE DOCUMENTS			
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		BOEHMER & LEHMAN, "Herpes Simplex Virus Type 1 ICP8: Helix-Destabilizing Properties," <i>Journal of Virology</i> 67(2):711-715 (1993).	
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		DAVIS, et al., <i>Advanced Bacterial Genetics - A Manual for Genetic Engineering</i> (Cold Spring Harbor Laboratory, Cold Spring Harbor, N.Y., 1980).	

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Sheet 5 of 16	Attorney Docket Number	YU 125 25006.000643	

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		DYNAL, <u>Biomagnetic Techniques in Molecular Biology</u> , 1995.	
		ERNST, et al., "Cyanine dye labeling reagents for sulphhydryl groups," <i>Cytometry</i> 10:3-10 (1989).	
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		GUO, et al., "Direct fluorescence analysis of genetic polymorphisms by hybridization with oligonucleotide arrays on glass supports," <i>Nucleic Acids Res.</i> 22(24):5456-5465 (1994).	
		GUO, et al., "Enhanced discrimination of single nucleotide polymorphisms by artificial mismatch hybridization," <i>Nature Biotechnology</i> 15:331-335 (1997).	
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		HACIA, et al., "Detection of heterozygous mutations in BRCA1 using high density oligonucleotide arrays and two-color fluorescence analysis," <i>Nature Genetics</i> 14:441-447.	

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		HAGIWARA, et al., "Quantitation of hepatitis C Virus RNA in Serum of Asymptomatic Blood Donors and Patients with Type C Chronic Liver Disease," <i>Hepatology</i> 17(4):545-550 (1993).	
		HANVEY, et al., "Antisense and Antigene Properties of Peptide Nucleic Acids," <i>Science</i> 258: 1481-1485 (1992).	
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		HOLLOWAY, et al., "An exonuclease-amplification coupled capture technique improves detection of PCR product," <i>Nucleic Acids Research</i> 21:3905-3906 (1993).	
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		Application Number	09/396,340 09/855,170
		Filing Date	September 15, 1999 May 14, 2001
		First Named Inventor	Paul M. Lizardi
		Group Art Unit	4643
		Examiner Name	
Sheet 7 of 16	Attorney Docket Number	YU-125 25006.000643	

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		JIANG, et al., "An efficient method for generation and subcloning of tandemly repeated DNA sequences with defined length, orientation and spacing," <i>Nucl. Acids Res.</i> 24:3278-3279 (1996).	
		JOHNSTONE & THORPE, <i>Immunochimistry In Practice</i> (Blackwell Scientific Publications, Oxford, England, 1987) pages 209-216 and 241-242.	
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		Filing Date	September 16, 1999 May 14, 2001
		First Named Inventor	Paul M. Lizardi
		Group Art Unit	1643
		Examiner Name	
Sheet 8 of 16	Attorney Docket Number	YU-125-25006.000603	

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		KOOL, et al., "Circular oligonucleotides: New concepts in oligonucleotide design," <i>Annu. Rev. Biophys. Biomol. Struct.</i> 25:1-28 (1996).	
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		LEE, et al., "Coordinated leading and lagging strand DNA synthesis on a minicircular template," <i>Mol Cell.</i> 1(7):1001-10 (1998).	
		LEFRERE, et al., "Towards a new predictor of AIDS progression through the quantitation of HIV-1 DNA copies by PCR in HIV-infected individuals," <i>British Journal of Haematology</i> 82(2): 467-471 (1992).	
		LESNIK & FREIER; "Relative Thermodynamic Stability of DNA, RNA, and DNA:RNA Hybrid Duplexes: Relationship with Base Composition and Structure," <i>Biochemistry</i> 34: 10807-10815 (1995).	

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		Filing Date	September 15, 1999 May 14, 2001
		First Named Inventor	Paul M. Lizardi
		Group Art Unit	4643
		Examiner Name	
Sheet 9 of 16	Attorney Docket Number	YU-125 25006.0006.43	

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		LIU, et al., "Rolling circle DNA synthesis: Small circular oligonucleotides as efficient templates for DNA polymerases," <i>J. Am. Chem. Soc.</i> 118:1587-1594 (1996).	
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		MARSHALL, et al., "Detection of HCV RNA by the asymmetric gap ligase chain reaction," <i>PCR Methods Appl.</i> 4(2):80-4 (1994).	
		MASKOS, et al., "Oligonucleotide hybridizations on glass supports: a novel linker for oligonucleotides synthesized <i>in situ</i> ," <i>Nucleic Acids Research</i> 20:1679-1684 (1992).	
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		Application Number	09/390,340 09/855,170
		Filing Date	September 15, 1999 May 14, 2001
		First Named Inventor	Paul M. Lizardi
		Group Art Unit	1643
		Examiner Name	
Sheet 10 of 16	Attorney Docket Number	YU 125 25006-000443	

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		MCCRAY, et al., "A new approach to time-resolved studies of ATP-requiring biological systems: Laser flash photolysis of caged ATP," <i>Proc. Natl. Acad. Sci. USA</i> 77:7237-7241 (1980).	
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		Application Number	09/396,340 09/855,170
		Filing Date	September 15, 1999 May 14, 2001
		First Named Inventor	Paul M. Lizardi
		Group Art Unit	1843
		Examiner Name	
Sheet 11 of 16	Attorney Docket Number	YU 125 25006-00043	

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		NIKIFOROV, et al., "The Use of Phosphorothioate Primers and Exonuclease Hydrolysis for the Preparation of Single-stranded PCR Products and their Detection by Solid-phase Hybridization," <i>PCR Methods and Applications</i> 3: 285-291 (1994).	
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		First Named Inventor	Paul M. Lizardi
		Group Art Unit	1643
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Sheet 12 of 16	Attorney Docket Number	YU 125 25006-0006US	

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		PRAKASH & KOOL, "Structural effects in the recognition of DNA by circular oligonucleotides," <i>J. Amer. Chem. Soc.</i> 114:3523-3527 (1992).	
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		SCHENA, et al., "Quantitative Monitoring of Gene Expression Patterns with a Complementary DNA Microarray," <i>Science</i> 270:467-470 (1995).	
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		Application Number	09/396,340 09/855,170
		Filing Date	September 15, 1999 May 14, 2000
		First Named Inventor	Paul M. Lizardi
		Group Art Unit	4643
		Examiner Name	
Sheet 14 of 16	Attorney Docket Number	YU 125 25006.0006U3	

OTHER ART - NON PATENT LITERATURE DOCUMENTS			
Examiner's Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T ²
		STUDIER, et al., "Use of T7 RNA Polymerase to Direct Expression of Cloned Genes," <i>Methods in Enzymology</i> 185: 60-89 (1990).	
		SYVANEN, et al., "Fast quantification of nucleic acid hybrids by affinity-based hybrid collection," <i>Nucleic Acids Res.</i> 14(12):5037-48 (1986).	
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		TYAGI & KRAMER, "Molecular beacons: probes that fluoresce upon hybridization," <i>Nature Biotechnology</i> 14:303-308 (1996).	
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		VILLEMAIN & GIEDROC, "The N-terminal B-domain of T4 gene 32 protein modulates the lifetime of cooperatively bound Gp32-ss nucleic acid complexes," <i>Biochemistry</i> . 35(45):14395-404 (1996).	
		VOGELSTEIN, et al., "Supercoiled loops and eucaryotic DNA replicaton," <i>Cell</i> . 22(1 Pt 1):79-85 (1980).	

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				Filing Date	September 15, 1999 May 14, 2001
				First Named Inventor	Paul M. Lizardi
				Group Art Unit	4643
				Examiner Name	
Sheet	15	of	16	Attorney Docket Number	YU 125- 25006. POC. 43

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		WAGGONER, "Covalent labeling of proteins and nucleic acids with fluorophores," <i>Meth. Enzymology</i> 246:362-373 (1995)	
		WALKER & LINN, "Detection of Mycobacterium tuberculosis DNA with thermophilic strand displacement amplification and fluorescence polarization," <i>Clin Chem.</i> 42(10):1604-8 (1996).	
		WALKER, et al., "Strand displacement amplification--an isothermal, in vitro DNA amplification technique," <i>Nucleic Acids Res.</i> 20(7):1691-6 (1992).	
		WALTER & STRUNK, "Strand displacement amplification as an in vitro model for rolling-circle replication: deletion formation and evolution during serial transfer," <i>Proc Natl Acad Sci U S A.</i> 91(17):7937-41 (1994).	
		WANSINK, et al., "Fluorescent Labeling of Nascent RNA Reveals Transcription by RNA Polymerase II in Domains Scattered Throughout the Nucleus," <i>Journal of Cell Biology</i> 122(2): 283-293 (1993).	
		WIEDMANN, et al., "Ligase Chain Reaction (LCR) - Overview and Applications," <i>PCR Methods and Applications</i> (Cold Spring Harbor Laboratory Press, Cold Spring Harbor Laboratory, NY, 1994) pages S51-S64.	
		WINN-DEEN, et al., "Non-radioactive detection of Mycobacterium tuberculosis LCR products in a microtitre plate format," <i>Molecular and Cellular Probes</i> (England) 7(3):179-186 (1993).	
		YOUNG & ANDERSON, "Quantitative analysis of solution hybridisation," <i>Nucleic Acid Hybridisation: A Practical Approach</i> pages 47-71 (IRL Press, 1985).	
		YU, et al., "Cyanine dye dUTP analogs for enzymatic labeling of DNA probes," <i>Nucleic Acids Research</i> 22(15): 3226-3232 (1994).	
		ZEHAVI, et al., "Light sensitive glycosides. I. 6-Nitroveratryl β-D-Glucopyranoside and 2-Nitrobenzyl β-D-Glucopyranoside," <i>J. Organic Chem.</i> 37:2281-2288 (1972).	

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		Application Number	09/396,340 09/855,170		
		Filing Date	September 15, 1999 May 14, 2001		
		First Named Inventor	Paul M. Lizardi		
		Group Art Unit	1643		
		Examiner Name			
Sheet	16	of	16	Attorney Docket Number	YU-125 25006-000443

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		ZHU & ITO, "Purification and characterization of PRD1 DNA polymerase," <i>Biochimica Biophysica Acta</i> 1219(2): 267-276 (1994).	
		ZIJDERVELD & VAN DER VLIET, "Helix-Destabilizing Properties of the Adenovirus DNA-Binding Protein," <i>Journal of Virology</i> 68(2):1158-1164 (1994).	

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		Filing Date	September 15, 1999 May 14, 2001
		First Named Inventor	Paul M. Lizardi
		Group Art Unit	1643
		Examiner Name	
Sheet 1 of 1	Attorney Docket Number	YU 125- 25006-0006 u3	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY
		Office. ³	Number ²	Kind Code ⁵ (if known)		
		EP	0 640 691	A2	Becton Dickinson and Co.	03-01-1995
		WO	96/00795	A2	Kalyx Biosciences, Inc.	01-11-1996
		WO	97/20948	A1	Koch	06-12-1997
		WO	98/39485	A2	The Regents of the University of Michigan	09-11-1998

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		UNRAU & DEUGAU, "Non-cloning amplification of specific DNA fragments from whole genomic DNA digests using DNA 'indexers'" <i>Gene</i> 145:163-9 (1994).	
		WHITE, et al., "Concatemer chain reaction: A Taq DNA polymerase-mediated mechanism for generating long tandemly repetitive DNA sequences," <i>Analytical Biochemistry</i> 199:184-90 (1991).	
		ZHANG, et al., "Amplification of target-specific, ligation-dependent circular probe," <i>Gene</i> 211:277-85 (1998).	

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